Meinzer, O. E. and Hare, F. F., "Geology and Water Resources of Tularosa Basin, New Mexico," U.S.G.S., Water-Supply Paper 343, 1915, 317 pp.

p. 11 "Tularosa Basin is bounded on the east by the Jicarilla, Sierra Blanca, and Sacramento Mountains.....

plate Iv (opposite page 14) map of the Tularosa Basin and Adjacent Country, 1851 shows from So- No. Seirra Sacramento, Sierra Blanca, Sierra Oscariba, Sierra Capitan, Sierra Carrizo.
Plate V So.to No. Sacramento Mts., Sierra Blanca, Sierra Capitan, but no Jicarilla Mts.

page 26 Description of the Sacramento Mountains
page 27 "The Sierra Blanca, which lies north of the Sacramento Mountains and with them forms a practially uninterrupted mountain wall, is the loftiest and most prominent of the ranges bordering the basin. It culminates near its south end in Sierra Blanca Peak, or White Mountain, whose altitude is 12,003 feet above sea level. From this peak the range extends for a distance of about 15 miles, trending first northward and then northeastward. At a number of points the general level of its crest is relieved by characteristic peaks, the highest and most conspicuous of which, next to Sierra Blanca, is Nogal Peak, nearly 10,000 feet abaove sea level. The highest point if the range is aboe the timer line and remains snowcapped longer than any other peak in the region. The Sierra Blanca, like the Sacramento Mountains, is in a sense the western edge of a great plateau, and for that reason appears much more lofty from the west than from the east. It differs, however, from the Scaramento Mountains in its topographic detail, the Sacramento Mountais having the castellated appeaacne produced by weathering of nearly horizontal sedimentary beds of differing hardness, and the Sierra Blanco having the more massive appearance and less conventional pattern produced by the weathering and erosion of crystalline rocks. Its drainage area, like that of the Sacramento Mountais, is the largest on the east side, the only stream on its west flank being Three Rivers which heads near Sierra Blanca Peak.

"North of the Sierra Blanca the mountain chain is represented by a number of more or less isolated mountais separated by easy passes, beyond which is a somewhat more continuous range known as the Jicarilla Mountains. The principal isolated masses are Tuckson, Carrizo, Baxter and Carrizozo Lone Mountains. Carrizo Mountain is a massive and compact ridge over 9,000 feet high, lying northest of Carrizozo, from which point it is in full view. Tucson Mountain is a lower ridge lying nearly due east of Carrizozo and occupying the reentrant between the Sierra Blanca and Carrizo Mountain. Lone Mountain is a rather complicated mass lying south and east of Cyote Station, its highest peak rising over 7,000 feet above sea level. Baxter Mountain is a smaller rock mass lying southeast of Lone Mountain, from which it is separated by an open pass. The mining town of Whiteoaks lies at the southeast base of Baxter Mountain.

"Large draws yielding great quantities of flood water discharge through the gaps between the mountains and smaller draws head on
p. 28 the west flanks of the mountains themselves, but there are no permanent streams in these ranges. One of the largest streamways is Nogal Arroyo, which discharges through the gap between Tucson Mountain and the north end of the Sierra Blanca."

Evidence:

1859 Surveyor General of New Mexico, Sketch of Public Survey of New Mexico. On this old map the Sacramento Mountains are shown, but the area now known as the Sierra Blanca Mountains is labeled, "S. Pico." The Jicarilla Mountains are not shown.

1873-1878 Map by the U. S. Army Engineers surveyed in the years 1873, 1876, 1877, 1878 under the direction of First Lieutenant George M. Wheeler, Corps of Engineers, as part of the U. S. Geographical Surveys west of the 100th. Meridian. This is sheet 84 of the Southwestern New Mexico Atlas. Jicarilla Mountains and Sierra Blanca shown fully. Sacramento Mountains only partially shown. Map does not include the Guadalupe Mountains.

1892 Tarr, Ralph S., "Reconnaissance of the Guadalupe Mountains," Texas Geological Survey, Bulletin 3, Austin, 1892. Tarr describes the Guadalupe Mountains as beginning in New Mexico at a moderately low elevation becoming prgressively higher to the south until they end in Guadalupe Point in Texas. Here the elevation is over 8,000 feet above sea level. (page 21)

1894 Map of the Territory of New Mexico, General Land Office, Department of the Interior. On this map the following mountains are named from north to south, and each is apparently considered a separate entity of equal rank: Jicarilla Mountains, Sierra Blanca, Sacramento Mountains, Guadalupe Mountains.

1900 Hill, Robert T., Topographic Atlas of the United States, U. S. G. S., Folio No. 3., "Physical Geography of the Texas Region." On Sheet XI the following are named in order from north to south: Jicarilla Mountains, Sierra Blanca, Sacramento Mountains, and the Guadalupe Mountains.

1903 Map of the Territory of New Mexico, General Land Office, Department of the Interior. On this map the nomenclature is the same as that on the 1894 map of the General Land Office.

repeat

1904 Richardson, George Burr, "Report of a Reconnaissance in ~~the~~ Trans-Pecos Texas," Bulletin 9, University of Texas Mineral Survey, Austin, 1904. Richardson describes the Guadalupe mountains as an eastward-sloping monocline with a steep scarp to the west. They begin in New Mexico and cross into Texas culminating in Guadalupe Point. At the state boundary the monoclinal ridge is ten miles wide. (page 21)

1905 Lindgren, Waldemar and Graton, L. C., "A Recoonaissance of the Mineral Deposits of New Mexico," U.S.G.S. Bull. 285, pp. 74-86, 1905. On page 75 he lists the mountains concerned in this case thus: "Farther south the province is represented by three chains of disconnected ranges which nevertheless conform in trend to more prominent ranges to the north. On the east are the Jicarilla Mountains, the Sierra Blanca, and the Sacramento and Guadalupe Mountains."

1907 On February 6, 1907, the U. S. Board on Geographic Names decided that the Sacramento Mountains "included those groups known as Jicarilla, Sierra Blanca, Sacramento, and Guadalupe."

Evidence: (Continued)

1909 Richardson, George Burr, Geologic Atlas of the United States, U. S. G. S. Folio No. 166, El Paso, Texas. On page one, Figure one is an index map of the area in which the locality represented by the folio is centered. On this map the mountains in question are labeled from north to south, Sacramento and Guadalupe, and the map does not extend far enough north to include the others.

1912 Map of the State of New Mexico, General Land Office, Department of the Interior. The nomenclature on this map pertaining to the mountains in question is the same as in previous Land Office maps.

1914 Alamo National Forest, New Mexico, (Exclusive of Guadalupe Mountains) U. S. G. S. topographic map. On this map only the Sacramento Mountains are labeled although the map extends into the area of the Sierra Blanca, and Sierra Blanca Peak is shown and labeled.

1915 Meinzer, O. E. and Hare, F. F., "Geology and Water Resources of Tularosa Basin, New Mexico," U.S.G.S., Water Supply Paper, 343. Plate I shows from north to south the Jicarilla Mountains, the Sierra Blanca, Sacramento Mountains, but the Guadalupes are not shown on the map which does not extend far enough eastward to cover that area. Plate IV is a reproduction of a map of 1851 of the Tularosa Basin and Adjacent Country. From north to south the mountains are labeled, Sierra Carrizo, Sierra Capitan, Sierra Oscariba, Sierra Blanca, and Sierra Sacramento.
Plate V is a reporduction of a Map of the Tularosa Basin and Adjacent Country, 1859-67. From north to south the mountains shown are the Sierra Blanca and the Sacramento Mountains, but where the Guadalupe Mountains should be is the notation "High Hills."
On page 26 the Sacramento Mountains are delimited and described.
On page 27 the Sierra Blanco are delimited and described, and differentiated from the Sacramento Mountains in terms of bedrock and topography. To quote: "The Sierra Blanca, like the Sacramento Mountains, is in a sense the western edge of a great plateau, and for that reason appears much more lofty from the west than from the east. It differs, , however, from the Sacramento Mountains in its topographic detail, the Sacramento Mountains having the castellated appearance produced by weathering of nearly horizontal sedimentary beds of differing hardness, and the Sierra Blanco having the more massive appearance and less conventional pattern produced by the weathering and erosion of crystalline rocks." (page 27) 7/4/7

The Jicarillas are described as separate mountains on page 28.

1922 Darton, N. H., "Geologic Structure of Parts of New Mexico," U.S.G.S., Bulletin 726, Part II, pp. 173-275. After a description of the Sacramento Mountains Darton says, "To the south the high cuesta continues into the Guadalupe Mountains, which extend to the southern margin of New Mexico and to El Capitan Peak, in Texas, where the altitude is 8,690 feet." (page 207)

1925 U.S.G.S. Topographic Map of New Mexico. On this map the name Sacramento Mountains is applied to all of the mountains in

Evidence:(Continued)

the case, and none of the sectional names are given.

1927 Map of New Mexico, General Land Office, Department of the Interior. On this map the nomenclature of the mountains in question is similar to previous Land Office maps.

1928 Darton, N. H., Geological Map of New Mexico, U. S. G. S. From north to south the mountains are listed as Jicarilla, Sierra Blanca, and Guadalupe. Sacramento Mountains appears as a general term covering all the others. Sierra Blanca, Jicarilla, and Capitan Mountains are shown as intrusive masses mainly of porphyry.

1931 Winchester, Dean E., Oil and Gas Map of New Mexico, New Mexico State Bureau of Mines and Mineral Resources. On this map the nomenclature is similar to that of the General Land Office map of 1927.

1932 U. S. Geographic Board, Sixth Report, page 655, "Sacramento Mountains: includes those groups known as Jicarilla, Sierra Blanca, Sacramento, and Guadalupe in Chaves, Eddy, Lincoln, and Otero Counties, New Mexico."

1933 Lasky, Samuel G. and Wootton, Thomas P., "The Metal Resources of New Mexico and Their Economic Features," Bull. No. 7, New Mexico State School of Mines, State Bureauof Mines and Mineral Resources. Socorro, New Mexico. "The Sacramento Mountains occupy the north-central part of the county and are continued northward by the Sierra Blanca. (page 84)

1936 Map of New Mexico, General Land Office, Department of the Interior. On this map the nomenclature is similar to that on previous Land Office maps.

1937 Capitan Quadrangle, New Mexico, U. S. G. S. Topographic Map. On this quadrangle the Sierra Blanca, Vera Cruz Mountains, Carrizo Mountain, Patos Mountain, are listed as separate units the whole of which are referred to and labeled the Sacramento Mountains.

1941 Lewis, F. E., "Position of San Andres group, West Texas and New Mexico," Bulletin of the American Association of Petroleum Geologists, Volume 25, No. 1, page 76. A rather complete map is here shown of the various ranges in the area. Only the Sacramento and Guadalupe are shown of the mountains concerned in this case.

1941 Lincoln National Forest, New Mexico, U. S. Forest Service. On this map Sacramento Mountains are labeled, but the Sierra Blanca are not named.

1942 Bates, Robert L., "The Oil and Gas Resouces of New Mexico," second edition, Bulletin 18, New Mexico School of Mines, State Bureau of Mines and Mineral Resources, Socorro, New Mexico. The Sacramento Mountains and the Guadalupe Mountains are described on pages 159, 162-163. "The area north of the Guadalupe Mountains and west of

Evidence: (Continued)

the Pecos River is called the Sacramento Cuesta. The precipitous west face of the Sacramento Mountains rises more than a mile above the Tularosa Valley." (page 163)
Figure 10, page 160, is a reproduction of the map of F. E. Lewis in "Position of the San Andres Group, West Texas and New Mexico," Bull., Amer. Assoc. of Petrol. Geol., Vol 25, No. 1, page 76.

Plate 13 in back pocket is by Ronald K. de Ford, and is entitled Major Structural Units of Southeastern New Mexico. On this map the following are clearly located and named in order from north to south: Jicarilla Mountains, Bone Mountain, Patos Mountain, Carizo Peak, Sierra Blanca, Sacramento Mountains, Guadalupe Mountains. The first five are shown as Tertiary igneous intrusions.

1943 Rand McNalley Commercial Atlas and Marketing Guide, 74th. edition, Map page 267 lists from north to south Jicarilla Mountains, Sierra Blanca, Sacramento Mountains, and Guadalupe Mountains. They all appear to be of equal rank.